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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
KOSOWSKI, ALEXANDER J	

ART UNIT	PAPER NUMBER
2125	

DATE MAILED: 04/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/729,532	RODGERS, MARK E.	
	Examiner	Art Unit	
	Alexander J. Kosowski	2125	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12/5/03 and 3/20/06*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-74* is/are pending in the application.

4a) Of the above claim(s) *16-74* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *05 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *12/5/03*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1) Claims 1-15 are presented for examination in light of the response to restriction filed 3/2/06. Claims 16-74 are withdrawn.

Claim Rejections - 35 USC § 103

2) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3) Claims 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Donnell, further in view of Blackett et al (U.S. PGPUB 2004/0138786).

Referring to claim 10, O'Donnell teaches a method for energy management comprising: receiving at an on-premise processor a first request from a power load controller pertaining to energy rating data, sending from the on-premise processor a second request message over a distribution network to the host processor pertaining to energy rating data and receiving at the on-premise processor a first rating response message over the distribution network from the host processor, the second request message including energy rating data (col. 3 lines 6-11 and col. 5 lines 5-25 and col. 6 lines 1-11, whereby utility power supplier sends rate tier information to gateway module and gateway module sends rate tier information to load shed modules and whereby gateway module engages in bi-directional communication with utility supplier and load shed modules engage in bi-directional communications with gateway module); sending from the on-premise processor to the power load controller a second rating response message including the energy rating data (col. 5 lines 5-25 and col. 6 lines 1-11, whereby gateway module sends

energy rating data to load shed modules); and determining in the power load controller whether to generate an activation signal based at least in part on the energy rating data (col. 5 lines 5-25, whereby load shed module determines whether or not to disconnect loads based on received rate tier information). However, O'Donnell does not explicitly teach utilizing 802.15.4-based wireless communication links.

Blackett teaches a system which utilizes intelligent electronic devices to monitor, measure and control power system parameters in an energy management system (Paragraph 0024 and Figure 2) whereby 802.11b compliant networking may be utilized to transmit data (Paragraph 0057)

Therefore, it would also have been obvious to one skilled in the art at the time the invention was made to utilize 802.15.4-based wireless communication links in the invention taught above since metering functions in a power distribution system require concurrent knowledge of the states of multiple circuits or devices in a system to be communicated to and from a central command and control entity in order to work efficiently and effectively (Blackett, Paragraph 0003), and since the use of 802.11b compliant networking is a well known alternative to other types of wireless networking standards (Blackett, Paragraph 0057).

Referring to claim 11, O'Donnell teaches that the activation signal activates a power load (col. 3 lines 20-26).

4) Claims 1-2, 4-5, 6-7, 8-9, and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Donnell et al (U.S. Pat 6,181,985), further in view of Elliason et al (U.S. Pat 5,644,173), further in view of Blackett et al (U.S. PGPUB 2004/0138786).

Referring to claim 1, O'Donnell teaches a method for energy management comprising: receiving energy rating data at an on-premise processor transmitted by a distribution network from a host processor and storing the energy rating data in a memory (col. 3 lines 3-36, whereby gateway module receives tier rate information over a network from a utility supplier computer), receiving at the on-premise processor a message from a power load controller requesting energy rating data and retrieving the energy rating data from the memory and sending a response message including the energy rating data from the on-premise processor to the power load controller (col. 5 lines 5-25 and col. 6 lines 1-11, whereby gateway module sends rate tier information to load shed modules and whereby load shed modules engage in bi-directional communications with gateway module); and determining in the power load controller whether to generate an activation signal based at least in part on the energy rating data (col. 5 lines 5-25, whereby load shed module determines whether or not to disconnect loads based on received rate tier information). However, O'Donnell does not explicitly teach that the rating data includes a schedule pertaining to time and energy costs, nor that messages are communicated using an 802.15.4-based wireless communication link.

Elliason teaches a method for energy management load add/shed control modules which control adding and shedding of loads based on received price tier information including time and energy cost data (col. 2 lines 2-7 and col. 7 lines 24-39).

Blackett teaches a system which utilizes intelligent electronic devices to monitor, measure and control power system parameters in an energy management system (Paragraph 0024 and Figure 2) whereby 802.11b compliant networking may be utilized to transmit data (Paragraph 0057)

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to utilize rating data including a schedule pertaining to time and energy costs in the invention taught above since this would allow a system to reduce demand through an add/shed strategy which can be applied in real time and in cooperation with consumer needs and since this would allow a control system to reduce energy consumption during times when the cost of energy is high (Elliason, col. 1 lines 25-33).

Therefore, it would also have been obvious to one skilled in the art at the time the invention was made to utilize an 802.15.4-based wireless communication link to transmit messages in the invention taught above since metering functions in a power distribution system require concurrent knowledge of the states of multiple circuits or devices in a system to be communicated to and from a central command and control entity in order to work efficiently and effectively (Blackett, Paragraph 0003), and since the use of 802.11b compliant networking is a well known alternative to other types of wireless networking standards (Blackett, Paragraph 0057).

Referring to claim 2, O'Donnell teaches that the activation signal activates a power load (col. 3 lines 20-26).

Referring to claims 4-5, O'Donnell teaches the above. However, O'Donnell does not explicitly teach that the energy rating data further comprises a first time period associated with a first usage rate and a second time period associated with a second usage rate, nor that the power load controller determines whether to activate the power load based further at least in part on the current time.

Elliason teaches a method for energy management load add/shed control modules which control adding and shedding of loads based on received price tier information including time and energy cost data (col. 2 lines 2-7 and col. 7 lines 24-39, whereby it is noted that price tier information would include pricing for various times and whereby the controllers add or shed loads utilizing a controller which compares tier schedules to existing conditions which would include time).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to utilize energy rating data comprising first and second time periods and current time in the invention taught above since this would allow a system to reduce demand through an add/shed strategy which can be applied in real time and in cooperation with consumer needs and since this would allow a control system to reduce energy consumption during times when the cost of energy is high (Elliason, col. 1 lines 25-33).

Referring to claims 6-7, O'Donnell teaches the above. In addition, O'Donnell teaches that rating data may be transmitted using any suitable conventional technique (col. 3 lines 9-11). However, O'Donnell does not explicitly teach that the distribution network transmits the rating data wirelessly, nor that transmitting wirelessly utilizes an 802.15.4-based communications link.

Blackett teaches a system which utilizes intelligent electronic devices to monitor, measure and control power system parameters in an energy management system (Paragraph 0024 and Figure 2) whereby 802.11b compliant networking may be utilized to transmit data (Paragraph 0057).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to transmit the rating data wirelessly utilizing an 802.15.4-based communications link

in the invention taught above since metering functions in a power distribution system require concurrent knowledge of the states of multiple circuits or devices in a system to be communicated to and from a central command and control entity in order to work efficiently and effectively (Blackett, Paragraph 0003), and since the use of 802.11b compliant networking is a well known alternative to other types of wireless networking standards (Blackett, Paragraph 0057).

Referring to claim 8, O'Donnell teaches a method for energy management, comprising: sending an energy rate request message from an appliance and receiving an energy rate schedule at the appliance utilizing a communication link (col. 5 lines 5-25 and col. 6 lines 1-11, whereby gateway module sends rate tier information to load shed modules and whereby load shed modules engage in bi-directional communications with gateway module), and determining in the appliance whether to activate a power load based in part on the energy rate schedule (col. 5 lines 5-25, whereby load shed module determines whether or not to disconnect loads based on received rate tier information). However, O'Donnell does not explicitly teach that the energy rate schedule comprises a first time period for a first usage rate and a second time period for a second usage rate, that activation is based in part on a current time, nor that messages are sent using 802.15.4-based wireless communication links.

Elliason teaches a method for energy management load add/shed control modules which control adding and shedding of loads based on received price tier information including time and energy cost data (col. 2 lines 2-7 and col. 7 lines 24-39, whereby it is noted that price tier information would include pricing for various times and whereby the controllers add or shed

loads utilizing a controller which compares tier schedules to existing conditions which would include time).

Blackett teaches a system which utilizes intelligent electronic devices to monitor, measure and control power system parameters in an energy management system (Paragraph 0024 and Figure 2) whereby 802.11b compliant networking may be utilized to transmit data (Paragraph 0057)

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to utilize an energy rate schedule comprising a first time period for a first usage rate and a second time period for a second usage rate and to activate based in part on a current time in the invention taught above since this would allow a system to reduce demand through an add/shed strategy which can be applied in real time and in cooperation with consumer needs and since this would allow a control system to reduce energy consumption during times when the cost of energy is high (Elliason, col. 1 lines 25-33).

Therefore, it would also have been obvious to one skilled in the art at the time the invention was made to utilize an 802.15.4-based wireless communication link to transmit messages in the invention taught above since metering functions in a power distribution system require concurrent knowledge of the states of multiple circuits or devices in a system to be communicated to and from a central command and control entity in order to work efficiently and effectively (Blackett, Paragraph 0003), and since the use of 802.11b compliant networking is a well known alternative to other types of wireless networking standards (Blackett, Paragraph 0057).

Referring to claim 9, O'Donnell teaches storing the energy rate schedule in a memory in the appliance (col. 4 lines 31-38, whereby a microcomputer and memory are utilized).

Referring to claims 13-14, see rejection of claims 4-5 above.

Referring to claim 15, O'Donnell teaches the above. In addition, O'Donnell teaches that controlled loads may comprise conventional domestic appliances (col. 3 lines 24-25). However, O'Donnell does not specifically teach that the power load activated is an air conditioning or heating load.

Elliason teaches a method for energy management load add/shed control modules which control adding and shedding of loads based on received price tier information including time and energy cost data (col. 2 lines 2-7 and col. 7 lines 24-39), whereby the controlled loads are for heating, ventilation and cooling (HVAC) (col. 4 lines 45-52).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to utilize heating and air conditioning loads in the invention taught above since this would allow an HVAC system to be adjusted based on tier rates as well as local information (Elliason, col. 2 lines 39-42 and col. 4 lines 23-52) and since this would allow a system to reduce demand through an add/shed strategy which can be applied in real time and in cooperation with consumer needs and since this would allow a control system to reduce energy consumption during times when the cost of energy is high (Elliason, col. 1 lines 25-33).

5) Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over O'Donnell et al, further in view of Blackett et al, further in view of Edelman et al (U.S. Pat 6,281,601).

Referring to claim 12, O'Donnell and Blackett teach the above. However, they do not explicitly teach that the activation signal activates a power generator.

Edelman teaches the activation of a power generator based on a utility rate schedule (col. 1 lines 44-55).

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to activate a power generator in the invention taught above since this would allow a turbogenerator to be used to provide peak shaving and load following (Edelman, col. 1 lines 5-11) and since this would allow the control system to follow setpoints to slow or limit the rate of acceleration or deceleration of a turbogenerator, which increases the overall efficiency of a system (Edelman, col. 1 lines 51-55).

6) Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over O'Donnell et al, further in view of Elliason et al, further in view of Blackett et al, further in view of Edelman et al.

Referring to claim 3, see rejection of claim 12 above.

Conclusion

7) The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Dailey (U.S. Pat 6,680,547) – teaches a switchable rechargeable supplemental power source which switches based on utility rates.

Davis et al (U.S. Pat 6,671,586) – teaches controlling power over a wireless network.

Aisa (U.S. Pat 6,493,643) – teaches appliance energy management based on power rates.

Gloriosco et al (U.S. Pat 5,926,776) – teaches a smart thermostat.

Hunter (U.S. PGPUB 2004/0078154) – teaches a method for reading meters remotely.

Elliason et al (U.S. Pat 5,598,349) – teaches a system which responds to utility pricing signals.

Drees (U.S. Pat 6,185,483) – teaches real-time pricing controller.

Nierlich et al (U.S. pat 6,681,154) – teaches a system for monitoring and controlling energy.

Ehlers et al (U.S. Pat 5,696,695) – teaches a system for rate-related control of loads.

Davis et al (U.S. Pat 6,167,389) – teaches applying real-time pricing to a load network.

8) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander J Kosowski whose telephone number is 571-272-3744. The examiner can normally be reached on Monday through Friday, alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard can be reached on 571-272-3749. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. In addition, the examiner's RightFAX number is 571-273-3744.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2100.

Alexander J. Kosowski
Patent Examiner
Art Unit 2125